REMARKS

Claims 1-14 were examined on their merits.

Applicant thanks the Patent Office for indicating that claims 1, 2 and 4-10 are allowed.

Applicant herein amends claim 3 to recite that priority message traffic required to control an industrial process is interchanged in real time.

Claims 1-14 are all the claims presently pending in the application.

1.   Claims 3 and 11-14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Robillard *et al.* (U.S. Patent No. 5,706,278). Applicant traverses the rejection of claims 3 and 11-14, and insofar as the rejection applies to new claim 15, for at least the reasons discussed below.

Robillard *et al.* disclose, *inter alia*, a deterministic network protocol that transmits both critical messages and non-critical messages such that the non-critical messages do not impact the delivery of the critical messages. Figure 3 of Robillard *et al.* illustrates a message "frame" that comprises several priority message slots (83_{1-N}) and a non-priority message slot (84). Each message frame is preceded by a beacon signal (81, 86) for synchronization purposes. *See, e.g.,* col. 8, lines 24-61 of Robillard *et al.* The message transfer protocol of Robillard *et al.* appears to be a synchronous message transfer system, in that time-critical messages have to wait until the next message frame is sent before they can be transferred over the network.

Robillard *et al.* fail to teach or suggest that priority message traffic related to process control is exchanged in real time, while non-critical digitized information is sent over unused

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time slots so as not to interfere with the critical digitized information. As discussed above, Robillard *et al.* disclose a synchronous message transfer system, in that time-critical messages have to wait until the next message frame is sent before they can be transferred over the network. Moreover, Robillard *et al.* fail to disclose a control system architecture that permits non-real time information coming from a unit connected to the Internet to enter the system architecture, through an Internet protocol, and reach a site operating unit or a programmed unit, without disturbing the deterministic traffic traversing the network between the programmed units. In sum, Robillard *et al.* lack any disclosure with respect to the exchange of message traffic between different levels of the control system architecture. Thus, Applicant submits that the Patent Office cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Since Robillard *et al.* do not teach or suggest that priority message traffic related to process control is exchanged in real time, while non-critical digitized information is sent over unused time slots so as not to interfere with the critical digitized information, Applicant submits that one of ordinary skill in the art would not have been motivated to modify Robillard *et al.* to transfer priority message traffic in such a manner. Without a motivation to modify or combine, a rejection based on a *prima facie* case of obviousness is improper. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998)). The Patent Office must make specific factual findings with respect to the motivation to combine or modify references. *In re Lee*, 277 F.3d 1338, 1342-44 (Fed. Cir. 2002). No such findings, other than a bare assertion of obviousness, have been proferred by the Patent Office. No deficiencies in Robillard *et al.* have been identified that might motivate an

artisan to modify Robillard *et al.* to use the time slot technique. For example, if Robillard *et al.* is adequate for the handling of both priority and non-priority communications, why would an artisan modify Robillard *et al.* to shift the non-priority communications to the unused time slots? Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Thus, Applicant submits that claim 3 is in condition for allowance, and further believes that claims 11-14 are allowable as well, at least by virtue of their dependency from claim 3. Applicant respectfully requests that the Examiner withdraw the § 103(a) rejection of claims 3 and 11-14.

2. Claims 12 and 14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Robillard *et al.* in view of Swales (U.S. Patent No. 6,321,272). Applicant traverses the rejection of claims 12 and 14 for at least the reasons discussed below.

The disclosure of Swales has been discussed at length in the August 14, 2003 Rule 116 Amendment, and for the sake of brevity, the discussion regarding Swales is incorporated by reference. Applicant notes that claim 3 is not rejected over Swales alone. Furthermore, the Patent Office acknowledged that Swales does not specifically mention the use of time slots. *See* May 28, 2003 Final Office Action, pg. 2.

The combination of Robillard *et al.* and Swales fails to teach or suggest that priority message traffic related to process control is exchanged in real time, while non-critical digitized information is sent over unused time slots so as not to interfere with the critical digitized

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information, as recited in claim 3 and included via dependency in claims 12 and 14. Thus,

Applicant submits that claims 12 and 14 are allowable over the combination of Robillard *et al.*

and Swales, and respectfully request that the Examiner withdraw the rejection of claims 12 and

14.

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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